Unit 3 WS #8
Algebra 2

Simplify.

1. $(3 + 5i)(1 + 2i)$
2. $(6 - i)(3 + 2i)$
3. $(7 + 3i)(3 + 4i)$
4. $(2 - 2i)(3 - 2i)$
5. $(5 - 3i)(6 + i)$
6. $(4 + 5i)(1 - 3i)$
7. $(7 - 6i)(3 + 2i)$
8. $(8 - i)(4 + 3i)$
9. $(1 - i)(1 + i)$
10. $(6 - 2i)(6 + 2i)$
11. $(3 + i)^2$
12. $(4 - 2i)^2$

25. $(\sqrt{3} + 2i)(\sqrt{3} - 4i)$
26. $(\sqrt{5} + 3i)(\sqrt{5} + 2i)$
27. $(\sqrt{8} + 2\sqrt{-1})(\sqrt{8} + 3\sqrt{-1})$
28. $(\sqrt{15} + \sqrt{-1})(2\sqrt{15} - \sqrt{-1})$
29. $(5 + 3i\sqrt{2})(3 + i\sqrt{2})$
30. $(6 - 2i\sqrt{2})(2 + i\sqrt{2})$

PRACTICE EXERCISES PART 2

Simplify.

13. $\frac{2 + i}{4 + i}$
14. $\frac{5 - 3i}{2 + 2i}$
15. $\frac{5 + 3i}{1 + 2i}$
16. $\frac{4 - 3i}{2 + 2i}$
17. $\frac{1}{4 + 2i}$
18. $\frac{1}{5 - 3i}$
19. $\frac{3 + 5i}{1 + 4i}$
20. $\frac{5 - 2i}{3 - 3i}$
21. $(3 + 2i) \div (3 - 2i)$
22. $(3 + 2i) \div (3 + 2i)$
23. $(3 + 4i) \div (3 + 2i)$
24. $(5 - 3i) \div (6 + 2i)$

31. $(3\sqrt{2} + i) \div (4\sqrt{2} - i)$
32. $(12\sqrt{3} + 7i) \div (\sqrt{3} - 7i)$
33. $(0.2 + 6i) \div (0.5 - 2i)$
34. $(0.7 + 9i) \div (0.7 - 9i)$
35. $(4 + \sqrt{-4}) \div (3 + \sqrt{-9})$
36. $(3 - \sqrt{-16}) \div (2 + \sqrt{-25})$
37. $(1 + \sqrt{-18}) \div (2 - \sqrt{-8})$
38. $(3 + \sqrt{-27}) \div (1 + \sqrt{-75})$